Correction to "ULF wave identification in the magnetosheath: The k-filtering technique applied to Cluster II data"

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Received 10 March 2004; accepted 16 March 2004; published 24 April 2004.

INDEX TERMS: 9900 Corrections

Citation: Sahraoui, F., et al. (2004), Correction to ''ULF wave identification in the magnetosheath: The k-filtering technique applied to Cluster II data,'' *J. Geophys. Res.*, *109*, A04222, doi:10.1029/2004JA010469.

[1] In the results presented in ''ULF wave identification in the magnetosheath: The k-filtering technique applied to Cluster II data'' by Sahraoui et al. (*Journal of Geophysical Research*, *108*(A9), 1335, doi:10.1029/2002JA009587, 2003), there is an error in the matrix transformation from the GSE frame to the MFA (Magnetic Field-Aligned) one: the **z** axis of the adopted frame was not really aligned with the local magnetic field. The MFA frame has in fact to be corrected with respect to the old one by the following angles between the axes: $(\mathbf{e}_x, \mathbf{e}'_x) = 3°$, $(\mathbf{e}_y, \mathbf{e}'_y) = -179°$ and $(\mathbf{e}_z, \mathbf{e}'_z) = 167°$. Because of this angle shift, some of the characteristics of the identified waves are slightly modified. This concerns particularly the propagation angles with respect to $\mathbf{B}_0$. In the figure below, which is to be compared with Figure 7a in the original paper, we illustrate such a modification concerning the dominant mirror mode previously identified: the modulus of the wave vector remains unchanged $k \approx 0.012$ rd/km; however, its direction is now 80 with respect to $\mathbf{B}_0$ instead of 62° given previously. Nevertheless, all the main physical conclusions brought by the paper (mixture of the LF linear modes with the predominance of the mirror mode, importance of the Doppler shift, ...) remain fully valid. The error in the rotation matrix was discovered thanks to a comparative study done on the same data by S. Walker and M. A. Balikhin, to whom we are grateful.

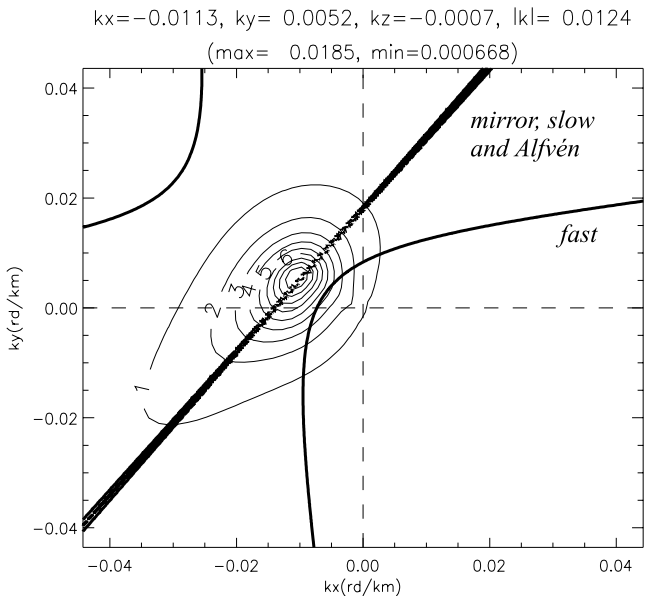

Figure 7. See color version of this figure in the HTML.

0148-0227/04/2004JA010469